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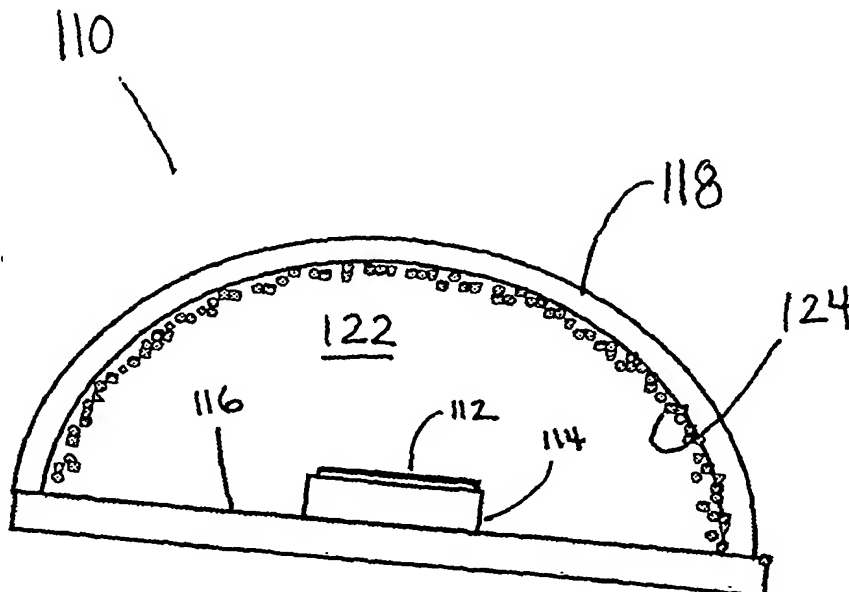
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(54) Title: COATED LED WITH IMPROVED EFFICIENCY



(57) Abstract: An LED device including an LED chip and a lens positioned apart from the chip and coated with a uniform thickness layer of fluorescent phosphor for converting at least some of the radiation emitted by the chip into visible light. Positioning the phosphor layer away from the LED improves the efficiency of the device and produces more consistent color rendition. The surface area of the lens is preferably at least ten times the surface area of the LED chip. For increased efficiency, the reflector and submount can also be coated with phosphor to further reduce internal absorption.

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